ACTIVITY ANSWER KEY

Chapter 4, Section 2

Check your answers from the Answer Key.
Correct all errors, then complete your next goal.

Lesson 6: *Biology*
Vascular and Nonvascular Plants

1. (c) James Olsen
2. herbs
3. healing powers
4. Plant
5. non-vascular
6. mosses
7. liverworts — (any order)
8. plants
9. flowers
10. leaves
11. stems
12. vascular tissue
13. roots — (any order)
14. _X_ carries water and minerals . . .
    _X_ provides support for the . . .
    ___ produces vascular tissue in plants
    ___ provides plants with leaves . . .
15. (a) It includes older tree branches.
16. sapwood, xylem
17. diffusion
18. semipermeable
19. (d) semipermeable cell membranes
20. (d) passage of molecules through a semipermeable membrane
21. _X_ Cells transport sugar solution . . .
    ___ Cells are long, hollow tubes
    _X_ Cells change shape to . . .
    _X_ Cells develop cell sieve plates
22. osmosis, diffusion
23. (a) friends
24. *"Men of character are always men of principle."*

Lesson 7: *Biology*
Seed and Non-seed

1. (a) authentic Viking artifacts
2. bristlecone pines, giant redwoods
3. plant, flood
4. non-seed plants
5. seed-producing plants
6. ferns
7. (d) rhizomes
8. rhizomes
9. spores
10. embryos
11. gymnosperms
12. conifers (evergreens)
13. pine
14. spruce
15. Douglas fir
16. cedars — (any order)
17. _X_ building materials
    _X_ electric poles
    _X_ railroad ties
    ___ ceder chests
18. Cedar
19. angiosperms
20. apples
21. flowering plants
22. dicotyledon
23. monocotyledon
24. peanut
25. corn
26. (c) their growing seasons

27. A Life cycles are complete in one . . .
    B Life cycles are complete in two . . .
    P Life cycles keep on going for . . .
    A Examples are sunflowers, peas . . .
    B Examples are lettuce, cabbage . . .
    B They are usually harvested for . . .
    P The best examples are trees . . .
    P They are used for building . . .
28. (c) plants are designed to supply mankind's basic needs of food, clothing and shelter
29. (c) the rock letters could have been made by Vikings
30. *"The workings of nature are for our instruction."*

Lesson 8: *Biology*
Roots Stems and Leaves

1. (a) drawings
2. (d) letters of an ancient alphabet
3. roots
4. X anchors, supports plant
   X supplies water, food to plant
   X may store food for the plant
   ___ keep plants from absorbing polluted rain water
5. (b) resting, similar to hibernating
6. taproot, trees
7. (c) 
8. Mangrove
9. (d) cypress-swamps
10. (b) stems
11. White potatoes, Jerusalem artichokes,tubers
12. 2 sugar beets
    3 maple trees
    1 sugar cane
13. (b) stem
14. xylem
15. phloem
16. (a) True
17. (c) leaves
18. veins, run parallel to each other
19. form a network, branch out from a central vein.
20. dicot
21. monocot
22. monocot
23. dicot
24. (b) cacti are designed to decrease water loss
25. (b) False
26. *"Unless the root cause of a problem is destroyed, it will come back to confront you."*

Lesson 9: *Biology*
Treasures of Biology

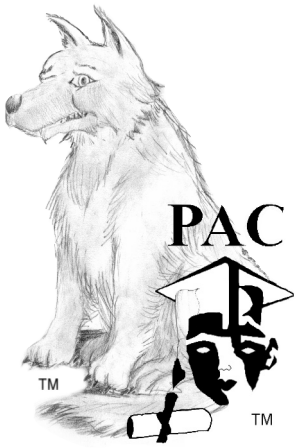
1. (d) neither a nor b
2. (a) "Velcro is a discovery that came directly from a useful design found in nature."
3. John Ray, 1600s
4. (c) Ray's religious convictions were opposed to the contents of the document.
5. home, salary, the college library, garden
6. (d) sadness
7. (b) 1667 (published) - 1627 (born) = 40
8. (c) "The bounds of science are not fixed. The treasures of nature are inexhaustible."
9. (b) History of Plants
10. botany, zoology, Father of English Natural History
11. John Ray, chemistry, Royal Society of London
12. (c) a system of thinking

13. ___ all true ideologies agree
    _X_ Prevailing ideologies impact all areas
    _X_ Most "Founding Fathers" of modern science held a . . .
    _X_ opposing ideologies often result in . .
14. (b) the twisted tree
15. *"People who make decisions based on truth and moral principles are trustworthy."*

Lesson 10: *Biology*
Flowers, Fruits and Seeds

1. (a) True
2. wind, dispersed
3. (b) lightweight seeds with fluffy . . .
4. (d) helicopter wing-shaped seeds . . .
5. (b) lightweight seeds with fluffy . . .
6. (a) flowers shake on stalks to release . . .
7. (c) dead, roundish bush detaches from . . .
8. (b) lightweight seeds with fluffy . . .
9. Water, oceans
10. coconut
11. (d) carried by the water
12. Animals, fur, eaten
13. shoot (or expel, hurl), (any order) snapdragons, dwarf mistletoe, impatiens (or touch-me-nots)
14. (b) begins to grow
15. dormant, rain, grow (or germinate)
16. angiosperms
17. (c) nature's seed packaging design for angiosperm plants
18. (c) to produce seeds to carry on the species
19. (a) True
20. Anther
21. Stamen
22. Stigma
23. pistil
24. Ovary
25. (c) definition 3
26. (b) transfer of pollen from the male . . .
27. transfer of pollen from male to female. . .
28. (c) transfer of pollen from the stamina . . .
29. (d) fertilizer
30. _3_ Egg cells (ovum) in the ovary . . .
    _5_ Ovary enlarges to protect the seeds.
    _2_ Pollen reaches the plant ovary . . .
    _1_ Pollen is transferred from stamen . . .
    _4_ Fertilized eggs grow into embryos . . .
31. seeds
32. _X_ nuts
    ___ lettuce
    _X_ melons
    _X_ tomatoes
    ___ potatoes
    ___ carrots
    _X_ pineapple
33. protect, disperse
34. (a) parents protecting and caring for their children until they are mature enough to be on their own
35. styrofoam cups, Viking Quest
36. *"Bloom where you are planted.*"

Ask for your QUIZ over Section 2.
Reminder: Students who score 85% or higher on the three section quizzes may be exempt from the chapter test!


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